

Beyond Collins and Sivers: further measurements of the target transverse spin-dependent azimuthal asymmetries in semi-inclusive DIS from COMPASS

Thursday 19 April 2007 12:10 (20 minutes)

In semi-inclusive DIS of polarized leptons on a transversely polarized target eight azimuthal modulations appear in the cross-section. Within QCD parton model four azimuthal asymmetries can be interpreted at leading order, two of them being the already measured Collins and Sivers asymmetries. The other two leading twist asymmetries, related to different transverse momentum dependent quark distribution functions, and also additional four asymmetries which can be interpreted as twist-three contributions have been measured from the COMPASS data, using a 160 GeV/c longitudinally polarized muon beam and a transversely polarized ^6LiD target. The preliminary results from the 2002-2004 data are presented here for the first time.

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Session Classification: Spin Physics

Track Classification: Spin Physics